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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The material in this TOP is intended for use in the receipt inspection of CB materiel and systems tested by TECOM. Supplementary sources of guidance are indicated when required. The TOP provides guidance on how to plan and conduct receipt inspection, including hazardous materiel. It provides specific test procedures, checklists, and data collection sheets.

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US ARMY TEST AND EVALUATION COMMAND
TEST OPERATIONS PROCEDURE

DRSTE-RP-702-107 1 July 1984
*Test Operations Procedure 8-2-500
AD No.

RECEIPT INSPECTION OF CHEMICAL-BIOLOGICAL (CB) MATERIEL

1. SCOPE

This Test Operations Procedure (TOP) outlines procedures for selective use in initial inspection, marking, and processing of all chemical and biological (CB) materiel received at the test agency for test. It will also serve as a guide for receipt inspection of non-CB materiel received for test in a CB environment. A detailed test plan (DTP) is usually provided and these procedures supplement the DTP. However, the TOP is written to stand alone if necessary. Appendix E provides guidance for receipt inspection of hazardous materials. Consult current publications of the 385-series concerning Safety, the 50-series concerning Surety requirements, and the 380- and 530-series concerning Security.

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*This TOP supersedes MTP 8-2-500, Receipt Inspection, 30 December 1967.

Approved for public release; distribution unlimited.

2. FACILITIES AND INSTRUMENTATION

2.1 Facilities

ITEM	REQUIREMENT
First aid equipment and supplies with ambulance(s) and emergency medical technicians (EMT), if required.	Perform first aid for industrial-type accidents. Additional medical facilities/persons may be required for some test items.
Laboratory facilities equipped to meet regulatory requirements for analysis of materials involved.	Conduct receipt inspection.
Photographic laboratory with suitable cameras and other equipment.	Document procedures, as-received condition, damage sustained, etc., of test items.
Shop or suitable building equipped with materials handling equipment, hand tools, and repacking equipment.	Protect test items, packing, and test participants from the weather and facilitate receipt inspection.

2.2 Instrumentation

ITEM	REQUIREMENT
Physical measuring devices (tapes, micrometers, etc.) graduated in metric units.	Measure test items. Precision required is that of the most stringent subtest requirements of the DTP. Lacking DTP or other guidance, a precision of one percent of the quantity measured will usually suffice.
Ballistic measuring devices (center of gravity, moment of inertia, etc.) with metric units.	Measure ballistic characteristics of artillery projectiles. Precision as above.
Weighing devices, graduated in metric units.	Weights of test items. Precision as above.

3. PREPARATION FOR TEST

3.1 Familiarization

Ensure that test participants are thoroughly familiar with items to be tested, test procedures, test diagnostic equipment, precautions to be observed, technical manuals (TMs), and other pertinent government, developing agency, and manufacturer's publications. Send key persons to developing agency/manufacturer's facilities for training, if scope of testing warrants. Conduct required training of test participants.

3.2 Project Officer

Appoint a project officer who will be responsible for all phases of planning, funding, conducting, and reporting tests.

3.3 Documentation

Ensure that pertinent test documentation [Approved DTP, operations plan (OPLAN), basic issue item list (BIIL), system support package (SSP) list, standing operating procedures (SOP), etc.] is available at the work site for ready reference, if needed.

3.4 Safety

Test in the safest manner consistent with the mission. Ensure that current AR 385-10[1], US Army Materiel Development and Readiness Command (DARCOM) Regulation 385-100[2], and all SOPs, safety directives, and safety requirements pertaining to the test item are followed. Perform system safety analysis as required by MIL-STD-882[3] and AR 385-16[4]. The guiding principle: use a minimum number of people for a minimum time and handle a minimum amount of hazardous materiel consistent with safe and efficient operations.

3.4.1 Safety Assessment Report (SAR)

Before the test is started, ensure that a SAR or safety release has been received from the developer and is understood. The SAR or safety release must include information about operational limitations, hazards peculiar to the test item, and hazards associated with the simulant agents/materiels used. If the SAR or safety release is not received or is inadequate, defer testing until the matter is resolved.

3.4.2 Test Safety Officer

Appoint a test safety officer (responsible for safety of each test). The test safety officer will be knowledgeable of the construction and operation of the test item and its critical components, know the hazards and safety aspects of the test, and review test procedures to evaluate hazards and recommend control measures.

3.4.3 Safety Equipment

Determine type of safety clothing and equipment needed for each operation; ensure that they are on hand.

3.4.4 Ammunition and Explosives

Comply with storage compatibility, hazard classification, and quantity/distance requirements as well as US Department of Transportation (DOT) shipping requirements for ammunition and explosives.

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[1]Superscript numbers match reference numbers in Appendix C.

3.4.5 Simulants and Industrial Chemicals

Review chemical data sheets, then store simulants, corrosives, and industrial chemicals according to Occupational Safety and Health Administration (OSHA) 2206[5].

3.4.6 Disposal Instructions

Ensure availability of approved disposal procedures and equipment for damaged, explosive, corrosive, or toxic materials.

3.4.7 through 3.4.9 Refer to Appendix E.

3.5 Instrumentation

All equipment used for data acquisition will be calibrated or certified before use, in accordance with AR 750-25[6], as supplemented.

3.6 Environmental Assessment

In compliance with the National Environmental Policy Act (NEPA), the Department of Army (DA) requires that an Environmental Impact Assessment for Life Cycle (EIALC) be prepared and assessed at the earliest practical stage in the planning process of any new system. Test execution US Army Test and Evaluation Command (TECOM) agencies must also be assessed for environmental impact. When it is determined that a proposed action may significantly affect the quality of the human environment, is highly environmentally controversial, or is anticipated to evoke litigation based on environmental issue, a detailed environmental impact statement (EIS) will be prepared and evaluated in accordance with NEPA processes. Before the test begins, the project officer will ensure that an approved EIALC and EIS (whenever necessary) has been received and understood.

3.7 Security

If classified tests or materials are involved, ensure that test participants have proper security clearances, test and storage areas have adequate physical protection, and document containers meet required standards (see publications of the 380- and 530-series).

3.8 Surety

If surety materiel is involved, ensure that support personnel are properly enrolled in the Surety Program, that medical requirements are met, and that test conduct documentation addresses all surety aspects in accordance with (IAW) regulatory requirements (see publications of the 50-series).

3.9 Logistics

Review DTP carefully to establish logistic support requirements. Ensure that test supplies and equipment are on hand and are sufficient to support the test, including repacking supplies and equipment for repacking to the required level.

3.10 Data Collection Sheets (DCS)

The DTP may authorize the use of local DCSs if desired (see pages B-11 and B-12, for examples). For a specific test series, the name of the project officer and the TECOM Test number should be entered on all DCSs, before going to the field.

3.11 Human Factors Engineering (HFE)

Bring HFE personnel into the preparation process early so that they may participate in planning and provide maximum HFE input during receipt inspection and early subtests.

4. TEST CONTROLS

4.1 Procedures

Ensure that weighing and measuring procedures will give required precision and that such equipment has current calibration certification[6].

4.2 Photographs

Take sufficient photographs (preferably color) to thoroughly document the inspection procedures. Include a scale (metric) in all photographs to show dimensions of the test item, as-received condition, damage sustained, etc. The scale must be so labeled that dimensions can be determined from the photograph. When repacking will be required, obtain enough photographs (Polaroid or similar film is sufficient) of procedures so that repacking can be duplicated to the as-received condition. If the identification number of a particular test item does not show in the photograph (because of photographic angle required to show damage, for instance), include a placard showing the number. Include labels in all photographs, if feasible, showing major components.

Avoid photographs which are cluttered, unprofessional, and/or difficult to interpret. Use care when taking photographs. Remove all extraneous material from the vicinity of the item and get as close to the item as practical. If background material (such as a drop cloth) is needed, the material must be clean and free of markings.

4.3 Marking

Mark each test item with an identification number, using waterproof ink/paint, and use it as the primary test identification number. Cross reference that number to manufacturer's serial number or other identification numbers of the item.

4.4 Project Officer's Log

Initiate and maintain a log IAW TECOM PAM 70-3[7]. Make the following additional entries each day that receipt inspection is in progress.

a. Date and time testing starts and stops.

b. Subtest(s) in progress.

c. Accidents/incidents, with names of witnesses.

d. Serial number of any test item believed to pose a possible safety hazard, with reasons or evidence for belief.

e. Calibration status of instruments.

f. Signature of project officer or his/her alternate.

4.5 Project File

Establish and maintain a project file IAW TECOM PAM 70-3[7].

4.6 Packing/Unpacking

Follow packing/unpacking instructions, when provided, and use all special tools provided/required for packing/unpacking. When a container/package contains several intermediate packages/units, number the interior packages as they are unpacked and sketch or photograph their location and orientation within the larger container. Repacking for environmental treatment must be to as-received condition with particular emphasis on moisture barrier protection.

4.7 Documentation

Record the condition of every package and test item. Prepare written record of undamaged items and all damage and irregularities.

5. PERFORMANCE TESTS

5.1 Safety

Throughout the conduct of receipt inspection, each test participant must be alert for hazards (both material and procedural) and report those observed to his/her supervisor. Use the checklists of Sections III and IV, Appendix B, TOP 8-2-553[8], when conducting the initial safety inspection. Any person observing a deficiency-type hazard (TOP 1-1-012[9]) must direct that operations be stopped until the matter is resolved.

a. Report test item hazards within 48 hours, using Equipment Performance Reports (EPRs), DARCOM Form 2134.

b. Classification. Classify all hazards IAW TOP 1-1-012[9]. Categorize safety hazards IAW MIL-STD-882[3].

c. Hazardous materiel. See Appendix E.

5.2 Unpacking and Initial Inspection

If the test items contain hazardous materiel(s), proceed IAW Appendix E.

5.2.1 Shipping Container

5.2.1.1 Data Required

a. Record the following for each container (Appendix B, Paragraph 1):

(1) Type of container: cardboard, wood, metal, other; explain as needed.

(2) Damage: broken, contaminated, corroded, cracked, crushed, dented, leaking, punctured, spilled, other; explain as necessary.

(3) Closure: bolts, hooks, nails, screws, strapping, tape, other.

(4) Markings: adequate, legible, IAW MIL-STD-129[10], and TM 38-250[11], with comments as appropriate.

(5) Marking information: national stock number (NSN), nomenclature, type, model, serial number, date of manufacture, manufacturer, weight, and cube.

b. Maintain log according to Paragraph 4.4 above.

c. Photographs (with scale), as appropriate.

5.2.1.2 Method

Visually inspect each container and record type, damage, closure, and markings. Measure and weigh container.

5.2.2 Shipping Container Unpacking

5.2.2.1 Data Required

a. Record the following for each container unpacked (Appendix B, Paragraph 2).

(1) Number of intermediate packages.

(2) Packing list is provided: yes or no.

(3) Inventory of intermediate packages against packing list and report of overages or shortages (EPR, DARCOM Form 2134).

(4) Unpacking instructions are provided: yes or no. Report of any deficiencies.

(5) Storage instructions are provided: yes or no. Record of any deficiencies.

(6) Notes concerning type and condition of blocking, bracing, and cushioning material.

b. Log maintained according to Paragraph 4.4 above.

c. Photographs (with scale), as appropriate.

5.2.2.2 Method

a. Refer to Appendix E.

b. Unpack the container. Compare the number and type(s) of intermediate packages with the packing list. Evaluate the unpacking and storage instructions. Note type and condition of blocking, bracing, and cushioning materials.

c. Mark packages/items as they are removed (see Paragraph 4.6 above).

d. Retain all packing, blocking, bracing, and cushioning materials.

e. Sketch and/or take sufficient number of photographs (with scale) so that repacking can be properly done.

5.2.3 Intermediate Packages

a. If packages are hermetically sealed, or otherwise packed to preclude repacking to the as-received condition, randomly select a statistically valid sample size (consult statistician) for receipt inspection; reserve the remainder for packaged tests specified in the DTP.

b. There may be packages within packages within containers. If so, repeat this paragraph (5.2.3) as necessary.

5.2.3.1 Data Required

a. Record the following for each package (Appendix B, Paragraph 3).

(1) Type and condition of packages.

(2) Legibility of markings and IAW MIL-STD-129[10] and/or TM 38-250[11].

(3) Marking information: NSN, nomenclature, type, model, serial number, date of manufacture, manufacturer, weight, and cube.

(4) Physical data: length, width, height, cube, and weight.

b. Log maintained according to Paragraph 4.4.

c. Photographs (with scale), as appropriate.

5.2.3.2 Method

a. Refer to Appendix E.

b. Visually inspect each package, noting type and condition.

c. Segregate damaged packages (without further unpacking) for future inspection/tests of Paragraph 5.2.5.

d. Mark packages as they are removed (see Paragraph 4.6).

5.2.4 Test Items

5.2.4.1 Data Required

a. Record the following for each test item (Paragraph 4, Appendix B).

NOTE: When many test items are involved, randomly select a representative sample (consult statistician) for inspection. If a deficiency is found, inspect every item with emphasis on that deficiency.

(1) Number per package/shipping container.

(2) Damage: yes or no.

(3) Markings: color/legibility, IAW MIL-STD-129[10] and TM 38-250[11],

(4) Marking information: NSN, nomenclature, type, model, serial number, date of manufacture, manufacturer, weight, and cube.

(5) Physical data: length, width, height, cube, and weight; other significant dimensions (describe), and volume, if necessary. Centers of gravity (CGs), moments of inertia, and ring gage are required for projectiles. (CGs and moments must be taken in the as-fired configuration.)

(6) Physical data from step (5) with item in: (a) operating or ready-for-use configuration and (b) packed in transit cases or otherwise prepared for local transport.

(7) Physical characteristics such as presence of a required subassembly or type of gauge.

b. Log maintained according to Paragraph 4.4 above.

c. Photographs (with scale), as appropriate.

5.2.4.2 Method

a. Refer to Appendix E.

b. Visually inspect each item; note type, condition, and whether properly assembled. Compare with BIIL, SSP, and TM.

c. Report shortages and/or missing parts, using EPR, DARCOM Form 2134.

d. Segregate items which are judged to be so damaged that troops in the field would not use them. Save damaged items for inspection/tests of Paragraph 5.2.5.

e. If the tester judges that troops in the field would overlook or consider damage negligible and use the item, conduct applicable procedures of Paragraph 5.2.5, then continue testing the item, unless the damage causes a safety hazard.

5.2.5 Damaged Items

5.2.5.1 Data Required

a. Record the following for each damaged test item (Paragraph 5, Appendix B).

(1) Package damage: broken, contaminated, corroded, cracked, crushed, leaking, spilled; other (explain and describe damage).

(2) Item damage: same as for package damage.

(3) Judge whether or not the item is so damaged that troops in the field would overlook or consider damage negligible and use the item.

(4) Results of radiographic examination, if appropriate, and whether or not item was removed from test (with reason for removal).

b. Log maintained according to Paragraph 4.4.

c. Photographs (with scale), as appropriate.

5.2.5.2 Method

(See Appendix E for Hazardous Materiels.) For each damaged item:

a. Before further unpacking, photograph the damage as first observed.

b. Mark each item for identification.

c. Refer to Appendix E.

d. Refer to Appendix E.

e. Complete unpacking.

f. Measure: length, width, height, cube, weight, and other significant dimensions (describe) and volume, if necessary. CGs, moments of inertia, and ring gage are required for projectiles. (CGs and moments must be taken in the as-fired configuration.)

g. Clean the item as necessary.

h. Radiograph the item, if appropriate, to determine if internal damage has occurred (MTP 8-2-509[12]).

i. Disassemble the item, if appropriate, and record indications of damage and/or corrosion to the components.

j. Repeat steps c through g for the disassembled components if necessary.

k. Photograph (with scale), as appropriate.

NOTE: 1. Items in sealed packages or containers in apparent good condition (not opened during this test) may be found to be damaged when opened during later tests. Record any such damage (including date found and circumstances) for inclusion and evaluation in the test report.

2. Damages, shortages, and missing parts must be reported to the developer on EPR (DARCOM Form 2134) within 48 hours.

5.3 Marking

5.3.1 Data Required

Maintain log IAW Paragraph 4.4 and record details of randomization procedure, identification numbers of items allocated to the various phases of testing, and serial numbers of items repacked in intermediate packages and shipping containers. Ensure that proper records are kept of packages/items within outer packages/containers, with sketches as appropriate (Paragraph 4.6).

5.3.2 Method

a. Sequentially number all individual items, intermediate packages, and unit packages (use permanent ink/paint).

b. Allocate items to each phase of testing on the basis of random selection or as directed in the DTP.

5.4 Repacking

5.4.1 Data Required

Record the following for each test item:

a. Identification numbers of any opened packages.

b. Type and quantity of material required to fill and repack the container to the original level.

c. Identification numbers, nomenclature, serial numbers, and/or lot numbers of items repacked in each container.

d. Markings used for identification and disposition instructions.

5.4.2 Method

When quantities of the test item are scheduled for storage surveillance testing, repack the items as similar to the as-received condition as possible.

a. Reuse original packing and filling material, when possible, and similar material when the original is not usable or is insufficient.

b. Repack and reseal the required number of opened packages; repack in intermediate packages and shipping containers.

c. Mark or label the repacked container with appropriate identification and instructions.

5.5 Functional Tests

5.5.1 Data Required

Based on the nature of the test item and functional tests prescribed in the DTP, record data generated. These data must be adequate to state positively whether the item(s) meet(s) performance criteria.

5.5.2 Method

Subject a statistically valid sample of the test items to functional tests.

6. DATA REDUCTION AND PRESENTATION

Present results of receipt inspection in a form which is appropriate to the item and test criteria; use narrative, tables, diagrams, photographs, and radiographs. For statistical treatment, consult a statistician.

Recommended changes to this publication should be forwarded to Commander, US Army Test and Evaluation Command, ATTN: DRSTE-AD-M, Aberdeen Proving Ground, MD 21005-5055. Technical information related to this publication may be obtained from the preparing agency, Commander, US Army Dugway Proving Ground, ATTN: STEDP-MT, Dugway, UT 84022. Additional copies of this document are available from the Defense Technical Information Center, Cameron Station, Alexandria, VA 22314. This document is identified by the accession number (AD No.) printed on the first page.

APPENDIX A. CHECKLIST

	Required	N/A	Accomplished
1. Receive TECOM Test Execution Directive*	_____	___	_____
2. Appoint project officer	_____	___	_____
3. Initiate project log	_____	___	_____
4. Establish project file	_____	___	_____
5. Receive DTP	_____	___	_____
6. Distribute DTP to support organizations	_____	___	_____
7. Ensure that necessary facilities and instruments are available	_____	___	_____
8 Preparation for test			
a. Receive SAR*	_____	___	_____
b. Appoint safety officer, log name	_____	___	_____
c. Complete safety review	_____	___	_____
d. Receive EIALC	_____	___	_____
e. Receive security procedures approval	_____	___	_____
f. Complete review of DTP and references	_____	___	_____
g. Verify logistical support availability	_____	___	_____
h. Complete training	_____	___	_____
9. Receipt inspection			
a. Inspect shipping container	_____	___	_____
b. Unpack shipping container	_____	___	_____
c. Inspect intermediate packages	_____	___	_____

*Must be received before testing begins.

APPENDIX A. CHECKLIST (CONT'D)

	Required	N/A	Accomplished
d. Inspect test items	_____	___	_____
e. Segregate damaged items and remove from test	_____	___	_____
f. Request disposition instructions for items removed from test	_____	___	_____
10. Marking and repacking			
a. Serialize test items	_____	___	_____
b. Complete repacking, as necessary	_____	___	_____
11. Compile data and photographs	_____	___	_____

APPENDIX B. DATA COLLECTION SHEETS

INTENTIONALLY BLANK

Receipt Inspection (Exterior Shipping Container) Date _____

TECOM Project No. _____ Subtest Paragraph No. _____

Project Officer _____ Place _____

Test Item Identification Number _____

1. Exterior Shipping Container

Complete subparagraphs a through h (below) for each container:

a. Type: ___ Cardboard, ___ Metal, ___ Wood, ___ Other. Explain _____

_____

_____

b. Damage: ___ Yes, ___ No.

c. Type of Damage: ___ Broken, ___ Contaminated with foreign materiel, ___ Corroded, ___ Cracked, ___ Crushed, ___ Dented, ___ Leaking, ___ Punctured, ___ Spilled, ___ Other. Explain _____

_____

_____

d. Leak test required? ___ Yes, ___ No. Results _____

_____

e. Closure: ___ Bolts, ___ Hooks, ___ Nails, ___ Screws, ___ Strapping, ___ Tape, ___ Other. Explain _____

_____

f. Marking: ___ Adequate, ___ Illegible, ___ Legible, ___ IAW MIL-STD-129[10], ___ IAW TM 38-250[11]. Comments: _____

_____

_____

Receipt Inspection (Exterior Shipping Container) (Cont'd)

g. Marking information:

NSN: _____

Nomenclature: _____

Type: _____ Model: _____

Serial No.: _____ Date of Manufacture: _____

Name of Manufacturer: _____

Name of Contractor: _____ Contract No. _____

Contract Date: _____

Weight: _____ Cube: _____

h. Physical data:

Length (cm) _____ Height (cm) _____

Width (cm) _____ Cube (m^3) _____

Weight (kg) _____

NOTE: a. Dimensions to the nearest x.x cm; weights to the nearest x.x kg.

b. Precision specified should be comparable to that specified for test items; that is, if individual items are weighed to one gram and there are one thousand items in one shipping container, the shipping container should be weighed to the nearest kilogram.

Submitted by: _____ _____
(Signed) (Printed)

Receipt Inspection (Shipping Container Unpacking) Date _____

TECOM Project No. _____ Subtest Paragraph No. _____

Project Officer _____ Place _____

Test Item Identification Number _____

2. Shipping Container Unpacking

a. Number of intermediate packages: _____

b. Leakage test required? ___ Yes, ___ No. Results of leakage test:

_____

_____

c. Intermediate packages inventoried against packing list? ___ Yes, ___ No. Explain _____

_____

d. Packing List: ___ Yes, ___ No. List is deficient as follows: _____

_____

_____

e. Unpacking Instructions: ___ Yes, ___ No. Instructions are deficient as follows: _____

_____

f. Storage Instructions: ___ Yes, ___ No. Instructions are deficient as follows: _____

_____

g. Blocking: ___ Yes, ___ No.

(1) Type: ___ Plastic, ___ Wood, ___ Other. Describe _____

_____

Receipt Inspection (Shipping Container Unpacking) (Cont'd)

(2) Condition: ___ Apparently as Shipped, ___ Broken, ___ Dislodged, ___ Other. Describe _____

_____

h. Bracing: ___ Yes, ___ No.

Type: ___ Plastic, ___ Wood, ___ Other. Describe _____

_____

_____

i. Cushioning material: ___ Yes, ___ No. Describe type and condition:

_____

_____

Submitted by: _____ _____
(Signed) (Printed)

Receipt Inspection (Intermediate Packages) Date _____

TECOM Project No. _____ Subtest Paragraph No. _____

Project Officer _____ Place _____

Test Item Identification Number _____

3. Intermediate Packages. Complete a through g (below) for each package:

a. Type: ___ Cardboard, ___ Metal, ___ Wood, ___ Other. Explain _____

_____

b. Leakage test required? ___ Yes, ___ No. Results of leakage tests:

_____

_____

c. Damage: ___ Yes, ___ No.

d. Type of Damage: ___ Broken, ___ Contaminated with foreign material, ___ Corroded, ___ Cracked, ___ Crushed, ___ Dented, ___ Leaking, ___ Punctured, ___ Spilled, ___ Other. Explain _____

_____

_____

NOTE: Segregate damaged packages/items without further unpacking and perform inspections/test of Paragraph 5.1.4, basic.

NOTE: Do not open interior packages at this time.

e. Markings: ___ Number legible, ___ Number IAW MIL-STD-129[10], ___ Number IAW TM 38-250[11], ___ Comment: _____

_____

Receipt Inspection (Intermediate Packages) (Cont'd)

f. Marking Information:

NSN _____

Nomenclature _____

Type _____ Model _____

Serial No. _____ Date of Manufacture _____

Name of Manufacturer _____

Weight _____ Cube _____

g. Physical Data:

Length (cm) _____ Height (cm) _____

Width (cm) _____ Cube (m^3) _____

Weight (kg) _____

NOTE: a. Dimensions to the nearest x.x cm; weights to the nearest x.x kg.

b. "x.x" should be of the same accuracy as the most stringent subtest of the basic DTP.

Submitted by: _____ _____
(Signed) (Printed)

Receipt Inspection (Test Items) Date _____

TECOM Projec . No. _____ Subtest Paragraph No. _____

Project Officer _____ Place _____

Test Item Identification Number _____

4. Test Items. Complete subparagraphs a through k for each item:

a. Number per shipping container? _____

b. Damage: ___ Yes, ___ No.

c. Leakage test required? ___ Yes, ___ No. Results of leakage test:

_____

_____

d. Type of damage: ___ Broken, ___ Contaminated with foreign material, ___ Corroded, ___ Cracked, ___ Crushed, ___ Dented, ___ Leaking, ___ Punctured, ___ Spilled, ___ Other. Explain _____

_____

e. Markings: Color _____, Legibility _____, Number IAW MIL-STD-129[10] _____, Number IAW TM 38-250[11] _____

f. Marking Information:

NSN _____

Nomenclature _____

Type _____ Model _____

Serial No. _____ Date of Manufacture _____

Name of Manufacturer _____

Weight _____ Cube _____

g. Check items to ensure that they are properly assembled: ___ Yes, ___ No. Explain _____

Receipt Inspection (Test Items) (Cont'd)

h. Physical Data:

Length (cm) _____ Height (cm) _____

Width (cm) _____ Cube (m^3) _____

Weight (kg) _____ Other significant dimensions (describe): _____

For projectiles:

Center of gravity (radial) _____

Center of gravity (longitudinal) _____

Moments of inertia _____

Ring gage all projectiles: ___ Go, ___ No-Go (If no-go, DO NOT FIRE!)

Inspect fuse wells for exudate of explosive material.

NOTE: a. Dimensions to the nearest x.x cm; weights to the nearest x.x kg.

b. "x.x" should be of the same accuracy as the most stringent subtest of the basic DTP.

i. Brief Description of Item: Diagram(s) of Item:

_____

_____

_____

_____

j. Repeat steps g and h with the item in the operating or ready-for-use configuration, using additional sheets for data and photographing, as appropriate.

k. Repeat step g and h with the item packed in transit cases or otherwise prepared for local transportation.

Submitted by: _____ _____
(Signed) (Printed)

Receipt Inspection (Damage Assessment and Control) Date _____

TECOM Project No. _____ Subtest Paragraph No. _____

Project Officer _____ Place _____

Test Item Identification Number _____

5. Damaged Items. Package damage: ___ Broken, ___ Contaminated with foreign material, ___ Corroded, ___ Cracked, ___ Crushed, ___ Dented, ___ Leaking ___ Punctured, ___ Spilled, ___ Other. Explain _____

_____

Briefly describe damage: _____

_____

6. Item Damage: ___ Broken, ___ Contaminated with foreign material, ___ Corroded, ___ Cracked, ___ Crushed, ___ Dented, ___ Leaking, ___ Punctured, ___ Spilled, ___ Other. Explain _____

_____

_____

Briefly describe damage: _____

_____

7. Judgement: ___ Item is judged by tester to be so slightly damaged that troops in the field would overlook or consider damage negligible and use the item.

___ Item is judged to be damaged beyond above criterion.

8. Radiographic examination: ___ No damage, ___ Damaged. Briefly describe damage: _____

_____

___ Remove from test because _____

Receipt Inspection (Damage Assessment and Control) (Cont'd)

9. Check items to be sure they are properly assembled: ___ Yes, ___ No.

Explain _____

_____

10. Inspection of disassembled components: ___ No damage, ___ Damaged.

Briefly describe damage: _____

_____

11. Control Information:

a. Calibration check of measuring equipment? ___ Yes, ___ No.
Explain _____

_____

b. Photographs? ___ Yes, ___ No. Explain _____

_____

Legible scale? ___ Yes, ___ No. Explain _____

_____

c. Radiographs? ___ Yes, ___ No. Explain _____

_____

_____

Submitted by: _____ _____
(Signed) (Printed)

PROJECTILE RECEIPT INSPECTION

Date _____ Test Number _____ Project Officer _____ Sheet No. ____ of ____ Sheets

Projectile Type _____ Lot Number _____ Fuze Type _____ Operator _____

Mass Time _____ Fixture Time _____

Round Number	Weight (kg)	Length (cm)	Bourrelet Diameter (cm)	Rotating Band Diameter (cm)	CG Distance From Base (cm)	Moments of Inertia Measurements (Time)		Ring Gauge (go/no-go)	Remarks
						Axial	Transverse		

COMMENTS:

Submitted by: _____ (Signed) _____ (Printed)

APPENDIX B. DATA COLLECTION SHEET: RECEIPT INSPECTION (CONT'D)

RECEIPT INSPECTION ADDENDUM

Test No. _____ Date: _____

Type Projectile: _____ Lot Number: _____ Type Fuze: _____

DPG Round Number	Front Bourrelet[a]		Rear Bourrelet		Shell Body (10/15 cm forward or rear bourrelet)	
	Before Firing	After Firing	Before Firing	After Firing	Before Firing	After Firing
	1st	2nd	1st	2nd	1st	2nd

[a]First and second measurements taken 90° apart. Measurements taken in centimeters. Sheet ____ of ____

Submitted by: _____ _____
(Signed) (Printed)

APPENDIX C. REFERENCES

1. AR 385-10, The Army Safety Program, 1 February 1979, as supplemented.

2. DARCOM R 385-100, Safety Manual, 17 August 1981.

3. MIL-STD-882, System Safety Program Requirements, 28 June 1977.

4. AR 385-16, System Safety Engineering and Management, 1 December 1980.

5. OSHA 2206, General Industry Standards, Occupational Safety and Health Administration, US Department of Labor, 11 March 1983.

6. AR 750-25, Army Metrology and Calibration System, 25 June 1971, as supplemented.

7. TECOM PAM 70-3, Project Engineer Handbook, as supplemented, 16 June 1978.

8. TO 8-2-553, Safety Evaluation, C-B Items, 1 August 1979.

9. TOP 1-1-012, Classification of Deficiencies and Shortcomings, 1 April 1979.

10. MIL-STD-129, Marking for Shipment and Storage, 30 September 1982.

**11. TM 38-250, Preparation of Hazardous Materials for Military Air Shipment, 22 March 1976.

**12. MTP 8-2-509, Radiography, 31 January 1968.

**13. DARCOM R 385-31, Safety Regulations for Chemical Agents H, HD, and HT, 20 April 1979.

**14. DARCOM R 385-102, Safety Regulations for Chemical Agents GB and VX, 6 May 1982.

**15. AR 50-6-1, (C) Chemical Surety Program, 15 April 1983.

**16. MTP 8-2-512, Leak Testing of Agent-Filled Munitions and Containers, 1 November 1971.

**Use these references when the specific item tested, or specific procedures or materials used in the test so indicate. Other references are necessary for test conduct in all cases.

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APPENDIX D. ABBREVIATIONS

AR - army regulation

BIIL - basic issue item list

CB - chemical and biological

CG - center of gravity

DA - Department of Army

DARCOM - US Army Materiel Development and Readiness Command

DCS - data collection sheet

DOT - US Department of Transportation

DPG - US Army Dugway Proving Ground

DTP - detailed test plan

EIALC - Environmental Impact Assessment for Life Cycle of the Test Item

EIS - Environmental Impact Statement

EMT - emergency medical technician

EPR - equipment performance report

IAW - in accordance with

MIL-STD - military standard

MTP - materiel test procedure

NEPA - National Environmental Protection Act

NSN - national stock number

OPLAN - operations plan

OSHA - Occupational Safety and Health Administration

RTM - real-time monitor

SAR - safety assessment report

SOP - standing operating procedure

SSP - system support package

TECOM - US Army Test and Evaluation Command

TM - technical manual

TOP - test operations procedure

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APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL

1. SCOPE

Same as basic, plus: For the purposes of Appendix E, hazardous CB materiel is considered that which contains/consists of lethal, incapacitating, radioactive, and/or incendiary materials.

2. FACILITIES AND INSTRUMENTATION

2.1 Facilities

Same as basic, plus:

ITEM	REQUIREMENTS
Agent handling and transfer facility with negative pressure and filtration capability so that agent cannot escape into the atmosphere. The facility must be equipped with ventilated glove boxes, laboratory hoods; protective clothing and equipment; decontaminating apparatus, personnel, and agents; material handling equipment; hand tools; and repacking equipment.	To safely handle lethal and incapacitating agents.
Change house equipped with protective clothing, protective masks, showers, and lockers.	To provide crews a secure place to leave personal clothing and possessions, outfit these crews for safe operations in a toxic environment, and minimize risk of transferring harmful materials to noncontaminated areas.

2.2 Instrumentation

Same as basic, plus:

ITEM	REQUIREMENTS
Leakage detection equipment.	Test for leaking test items.
Chemical or biological detector kits.	Safe unpacking and storage of lethal and incapacitating agents and munitions.
Chemical or biological sampling devices.	Collect samples.
Real-time monitors (RTMs).	To ensure that concentrations of hazardous materiel do not exceed the Surgeon General's standards.

APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL (CONT'D)

3. PREPARATION FOR TEST

3.1 Familiarization

Same as basic, plus: Test participant training will include a thorough review of DARCOM Regulations 385-31[13] and 385-102[14], the physiological effect(s) of lethal or incapacitating agents being tested, symptoms, first aid measures, and antidotes.

3.2 Project Officer

Same as basic.

3.3 Documentation

Same as basic.

3.4 Safety

Same as basic.

3.4.1 Safety Assessment Report (SAR)

Same as basic.

3.4.2 Test Safety Officer

Same as basic.

3.4.3 Safety Equipment

Same as basic.

3.4.4 Ammunition and Explosives

Same as basic.

3.4.5 Simulants and Industrial Chemicals

Same as basic.

3.4.6 Disposal Instructions

Same as basic.

3.4.7 Medical Protection

Station an ambulance at the test site with EMTs and a medical doctor, if appropriate, who have been specially trained on the symptoms and treatment of materials involved.

APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL (CONT'D)

3.4.8 Fire Protection

Alert (or have crew on standby at work site) fire departments when handling incendiaries or highly flammable items.

3.4.9 Security

Provide security force IAW AR 50-6-1[15] during receipt inspection of Surety material.

3.5 Instrumentation

Same as basic.

3.6 Environmental Assessment

Same as basic.

3.7 Security

Same as basic.

3.8 Surety

Same as basic.

3.9 Logistics

Same as basic.

4. TEST CONTROLS

Same as basic

5. PERFORMANCE TESTS

5.1 Safety

Same as basic

a. Same as basic.

b. Same as basic.

c. Inspect lethal/incapacitating items in an agent handling and transfer facility with all participants in protective gear which is IAW DARCOM Regulations 385-31[13] and 385-102[14] until the test safety officer determines that a lesser degree of protection is safe.

APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL (CONT'D)

d. Proper sampling and monitoring equipment must be in use throughout operations with hazardous material.

e. When unpacking hazardous materiel, sample the shipping container for the presence of agent (using the shipping container sampling port) before opening the container. Decontaminate if necessary.

5.2 Unpacking and Initial Inspection

Same as basic.

5.2.1 Exterior Shipping Container

Same as basic.

5.2.1.1 Data Required

Same as basic.

5.2.1.2 Method

Same as basic.

5.2.2 Shipping Container Unpacking

Same as basic.

5.2.2.1 Data Required

Same as basic.

5.2.2.2 Method

Same as basic.

a. When unpacking hazardous materiel, sample the shipping container for the presence of agent (use the shipping container sampling port) before opening the container. Decontaminate, if necessary.

b through e. Same as basic.

5.2.3 Intermediate Packages

Same as basic.

5.2.3.1 Data Required

Same as basic.

APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL (CONT'D)

5.2.3.2 Method

a. Open packages carefully, using proper level of protective equipment. Test for leakage; operate RTMs and detector kits. Decontaminate, if necessary, before exposing unprotected test participants.

b through d. Same as basic.

5.2.4 Test Items

Same as basic.

5.2.4.1 Data Required

Same as basic.

5.2.4.2 Method

a. When testing hazardous materiel, test for leaking test items by using protective equipment, RTMs, and agent detector kits. Decontaminate, if necessary, before exposing unprotected test participants.

b through e. Same as basic.

5.2.5 Damaged Items

Same as basic.

5.2.5.1 Data Required

Same as basic.

5.2.5.2 Method

Exercise extreme care in examining items which contain lethal or incapacitating material. Test for contamination (as appropriate) while using RTMs. For each damaged item:

a. Same as basic.

b. Same as basic.

c. If the test item contains radioactive materiel, swab the item(s) and packaging, as appropriate, to determine if the damage caused contamination of the packaging and exterior of the test item.

d. After marking items for identification (Paragraph 5.2.5.2.b, basic) test for leaks according to MTP 8-2-512[16].

e through k. Same as basic.

APPENDIX E. SUPPLEMENT FOR HAZARDOUS MATERIEL (CONT'D)

5.3 Marking

Same as basic.

5.4 Repacking

Same as basic.

5.5 Functional Tests

Same as basic.

5.5.1 Data Required

Same as basic

5.5.2 Method

Same as basic, plus: Observe precautions of Paragraph 5.1 of Appendix E and permit no release of toxics or incapacitants to the atmosphere.

6. DATA REDUCTION AND PRESENTATION

Same as basic.